

WETLAND EVALUATION DATA
AND SCORING RECORD

Wetland Name: Portions of the Goulbourn Wetland Complex

Geographic Location (municipality, lot/concession, etc):

Part of Lot 14 and 15, Concession 9, City of Ottawa

Map / Photo Locational Reference (e.g., latitude/longitude, NTS map, UTM):

18 T 425326 5006561 (UTM NAD83)

Eco-District: 6E-11 (Smith Falls)

Wetland Size (hectares): 74.58

Vegetation Form	FA
h	0.94
c	
dh	
dc	
ts	0.06
ls	
ds	
gc	
m	
ne	
be	
re	
ff	
f	
su	
u	

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1 Growing Degree-Days/Soils (max: 30 pts)

Refer to page 36 of manual for further explanation.

1. Determine the correct GDD value for your wetland (use Figure 5).
2. Circle the appropriate GDD value from the evaluation table below.
3. Determine the Fractional Area (FA) of the wetland for each soil type.
4. Multiply the fractional area of each soil type by the applicable score-factor in the evaluation table.
5. Sum the scores for each soil type to obtain the final score (maximum score is 30 points).

Portions Goulbourn Wetland Complex

Growing Degree-Days		Clay-Loam	Silt-Marl	Lime-stone	Sand	Humic-Mesic	Fibric	Granite
	<2800	15	13	11	9	8	7	5
	2800-3200	18	15	13	11	9	8	7
	3200-3600	22	18	15	13	11	9	7
	3600-4000	26	21	18	15	13	10	8
	>4000	30	25	20	18	15	12	8

Soil Type	FA of wetland in soil type	Enter appropriate score-factor from above table	
Clay/Loam	0.73	x 22	= 16.06
Silt/Marl:		x	=
Limestone:		x	=
Sand:		x	=
Humic/Mesic:	0.27	x 11	= 2.97
Fibric:		x	=
Granite:		x	=
Total			19.03

GDD/Soils Score (maximum 30 points) 19

1.1.2 Wetland Type

(Fractional Areas = area of wetland type/total wetland area)

	Fractional Area		Score
Bog		x 3 =	
Fen		x 6 =	
Swamp	1	x 8 =	8
Marsh		x 15 =	
Total		=	8

Wetland Type Score (maximum 15 points) 8

1.1.3 Site Type

(Fractional Area = area of site type/total wetland area)

	Fractional Area		Score
Isolated		x 1 =	
Palustrine (permanent or intermittent flow)	1	x 2 =	2
Riverine		x 4 =	
Riverine (at rivermouth)		x 5 =	
Lacustrine (at rivermouth)		x 5 =	
Lacustrine (with barrier beach)		x 3 =	
Lacustrine (exposed to lake)		x 2 =	
Total		=	2

Site Type Score (maximum 5 points) 2

1.2 BIODIVERSITY

1.2.1 Number of Wetland Types

(Check only one)

✓	One	=	9 points
	Two	=	13
	Three	=	20
	Four	=	30

Number of Wetland Types Score
(maximum 30 points) 9

1.2.2. Vegetation Communities

Use the data sheet provided in Appendix 4 to record and score vegetation communities (the completed form must be attached to this data record)

Scoring (circle only one option for each of the columns below):

Total # of communities with 1-3 forms	Total # of communities with 4-5 forms	Total # of communities with 6 or more forms
1 = 1.5 pts	1 = 2 pts	1 = 3 pts
2 = 2.5	2 = 3.5	2 = 5
3 = 3.5	3 = 5	3 = 7
4 = 4.5	4 = 6.5	4 = 9
5 = 5	5 = 7.5	5 = 10.5
6 = 5.5	6 = 8.5	6 = 12
7 = 6	7 = 9.5	7 = 13.5
8 = 6.5	8 = 10.5	8 = 15
9 = 7	9 = 11.5	9 = 16.5
10 = 7.5	10 = 12.5	10 = 18
11 = 8	11 = 13	11 = 19
+ 0.5 for each additional community = 5.5	+ 0.5 for each additional community = 2	+ 1.0 for each additional community =

Vegetation Communities Score
(maximum 45 points) 8

1.2.3 Diversity of Surrounding Habitat

Check all appropriate items. Only habitat within 1.5 km of the wetland boundary and at least 0.5 ha in size are to be scored.

	row crop
	pasture
	abandoned agricultural land
✓	deciduous forest
✓	coniferous forest
✓	mixed forest*
	abandoned pits and quarries
	open lake or deep river
	fence rows with deep cover, or shelterbelts
	terrain appreciably undulating, hilly or with ravines
✓	creek flood plain

* "Mixed forest" is defined as either 25% coniferous trees distributed singly or in clumps in deciduous forest, or 25% deciduous trees distributed singly or in clumps in coniferous forest. Note that Forest Resource Inventory (FRI) maps can be misleading since 25% conifer within a unit could be entirely concentrated around a lake.

Score 1 point for each feature checked, up to a maximum of 7 points.

Diversity of Surrounding Habitat Score
(maximum 7 points) 4

1.2.4 Proximity to Other Wetlands

Check highest appropriate category. (Note: if the wetland is lacustrine, score option #1 at 8 points).

✓	Points
✓	Hydrologically connected by surface water to other wetlands (different dominant wetland type), or to open lake or deep river within 1.5 km 8
	Hydrologically connected by surface water to other wetlands (same dominant wetland type) within 0.5 km 8
	Hydrologically connected by surface water to other wetlands (different dominant wetland type), or to open lake or deep river from 1.5 to 4 km away 5
	Hydrologically connected by surface water to other wetlands (same dominant wetland type) from 0.5 to 1.5 km away 5
	Within 0.75 km of other wetlands (different dominant wetland type) or open water body, but not hydrologically connected by surface water 5
	Within 1 km of other wetlands, but not hydrologically connected by surface water 2
	No wetland within 1 km 0

Name and distance (from wetland) of wetlands/waterbodies scored above:
0.72m from other portions of the Gouldbourn Complex PSW

Proximity to other Wetlands Score
(maximum 8 points) 8

1.2.5 Interspersion

Number of Intersections = 77

✓	Number of Intersections (Check one only)	Points
	26 or less	= 3
	27 to 40	= 6
	41 to 60	= 9
✓	61 to 80	= 12
	81 to 100	= 15
	101 to 125	= 18
	126 to 150	= 21
	151 to 175	= 24
	176 to 200	= 27
	>200	= 30

Interspersion Score (maximum 30 points) 12

1.2.6 Open Water Types

NOTE: this attribute is only to be scored for permanently flooded open water within the wetland (adjacent lakes do not count). Check one option only.

✓	Open Water Type	Characteristic	Points
✓	Type 1	Open water occupies < 5 % of wetland area	= 8
	Type 2	Open water occupies 5-25% of wetland (occurring in central area)	= 8
	Type 3	Open water occupies 5-25% (occurring in various-sized ponds, dense patches of vegetation or vegetation in diffuse stands)	= 14
	Type 4	Open water occupies 26-75% of wetland (occurring in a central area)	= 20
	Type 5	Open water occupies 26-75% of wetlands (small ponds and embayments are common)	= 30
	Type 6	Open water occupies 76%-95% of wetland (occurring in large central area; vegetation is peripheral)	= 8
	Type 7	Open water occupies 76-95% of wetland (vegetation in patches or diffuse open stands)	= 14
	Type 8	Open water occupies more than 95% of wetland area	= 3
	No open water		= 0

Open Water Type Score (maximum 30 points) 8

1.3 SIZE (BIOLOGICAL COMPONENT)

Total Size of Wetland = 74.58 ha

Sum of scores from Biodiversity Subcomponent

1.2.1
 + 1.2.2
 + 1.2.3
 + 1.2.4
 + 1.2.5
 + 1.2.6

 50

Circle the appropriate score from the table below.

		Total Score for Biodiversity Subcomponent									
		<37	37-47	48-60	61-72	73-84	85-96	97-108	109-120	121-132	>132
Wetland size (ha)	<20 ha	1	5	7	8	9	17	25	34	43	50
	20-40	5	7	8	9	10	19	28	37	46	50
	41-60	6	8	9	10	11	21	31	40	49	50
	61-80	7	9	10	11	13	23	34	43	50	50
	81-100	8	10	11	13	15	25	37	46	50	50
	101-120	9	11	13	15	18	28	40	49	50	50
	121-140	10	13	15	17	21	31	43	50	50	50
	141-160	11	15	17	19	23	34	46	50	50	50
	161-180	13	17	19	21	25	37	49	50	50	50
	181-200	15	19	21	23	28	40	50	50	50	50
	201-400	17	21	23	25	31	43	50	50	50	50
	401-600	19	23	25	28	34	46	50	50	50	50
	601-800	21	25	28	31	37	49	50	50	50	50
	801-1000	23	28	31	34	40	50	50	50	50	50
	1001-1200	25	31	34	37	43	50	50	50	50	50
	1201-1400	28	34	37	40	46	50	50	50	50	50
	1401-1600	31	37	40	43	49	50	50	50	50	50
	1601-1800	34	40	43	46	50	50	50	50	50	50
	1801-2000	37	43	47	49	50	50	50	50	50	50
	>2000	40	46	50	50	50	50	50	50	50	50

Size Score (Biological Component)
 (maximum 50 points) 10

2.0 SOCIAL COMPONENT

2.1 ECONOMICALLY VALUABLE PRODUCTS

2.1.1 Wood Products

Check the option that best reflects the total area (ha) of forested wetland (i.e., areas where the dominant vegetation form is h or c). Note that this is the area of all the forested vegetation communities, not total wetland size. Do not include areas where harvest is not permitted. Check only one option.

Area of wetland used for scoring 2.1.1: 70.41ha

	< 5 ha	= 0 pts
	5 - 25 ha	= 3
	26 – 50 ha	= 6
✓	51 – 100 ha	= 9
	101 – 200 ha	= 12
	> 200 ha	= 18

Source of information:

Field Observation and Satellite Imagery

Wood Products Score (maximum 18 points) 9

2.1.2 Wild Rice

Check only one.

	Present (min. size 0.5 ha)	= 6 pts
✓	Absent	= 0
	Harvest not permitted	= 0

Source of information:

Field Observation and Satellite Imagery

Wild Rice Score (maximum 6 points) 0

2.1.3 Commercial Baitfish

Check only one.

✓	Present	=	12 pts
	Absent	=	0
	Fishing not permitted	=	0

Source of information:

Field Observation

Commercial Fish Score (maximum 12 points) 12

2.1.4 Furbearers

Only species recognized as furbearers under the Fish & Wildlife Conservation Act may be scored here. Score 3 points for each furbearer species listed, up to a maximum of 12 points. Score 0 points if trapping is prohibited.

	Name of furbearer	Source of information
1.	Beaver	Field Observation
2.	Coyote	Field Observation
3.	Muskrat	Field Observation
4.	Bear	Field Observation
5.	Raccoon	Field Observation
6.	Red Squirrel	Field Observation

Furbearer Score (maximum 12 points) 12

2.2 RECREATIONAL ACTIVITIES

Sources of information and reasons for scoring a wetland under high or moderate use below, must be included below.

Circle one score for each of the activities listed. Score is cumulative – add score for hunting, nature enjoyment and fishing together for final score.

Intensity of Use	Type of Wetland-Associated Use			
		Hunting	Nature Enjoyment/ Ecosystem Study	Fishing
	High	40 points	40 points	40 points
	Moderate	20	20	20
	Low	8	8	8
	Not Possible/ No evidence	0	0	0

Sources of information (include evidence/criteria forming basis for score and any relevant reference used to obtain that information):

Hunting: Conversation with property owners

Nature: Conversation with property owners

Fishing: No viable lakes/rivers/stream for fishing (field visit)

Recreational Activities Score
(maximum 80 points) 8

2.3 LANDSCAPE AESTHETICS

2.3.1 Distinctness

Check only one.

	Clearly Distinct	= 3 pts
✓	Indistinct	= 0

Landscape Distinctness Score
(maximum 3 points) 0

2.3.2 Absence of Human Disturbance

Check only one.

	Human disturbances absent or nearly so	= 7 pts
✓	One or several localized disturbances	= 4
	Moderate disturbance; localized water pollution	= 2
	Wetland intact but impairment of ecosystem quality intense in some areas	= 1
	Extreme ecological degradation, or water pollution severe and widespread	= 0

Details regarding type, extent and location of disturbance scored:

Channel is regularly maintained, by dredging activity and removal of beaver dams

Source of information:

Field Observation and Communication with Property Owner

Absence of Human Disturbance Score
(maximum 7 points) 4

2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1 Educational Uses

Check highest appropriate category.

	Frequent	= 20 pts
	Infrequent	= 12
✓	No visits	= 0

Details regarding the type and frequency of education uses scored above:

Source of information:

Communication with the Property Owner

Educational Uses Score (maximum 20 points) 0

2.4.2 Facilities and Programs

Check all appropriate options, score highest category checked.

	Staffed interpretation centre	= 8 pts
	No interpretation centre or staff, but a system of self-guiding trails or brochures available	= 4
	Facilities such as maintained paths (e.g., woodchips), boardwalks, boat launches or observation towers, but no brochures or other interpretation	= 2
✓	No facilities or programs	= 0

Additional Notes/Comments:

Source of information:

Field Observation and Communication with Property Owner

Facilities and Programs Score
(maximum 8 points) 0

2.4.3 Research and Studies

Check all that apply; score highest category checked.

✓	Long term research has been done	= 12 pts
	Research papers published in refereed scientific journal or as a thesis	= 10
	One or more (non-research) reports have been written on some aspect of the wetland's flora, fauna, hydrology, etc.	= 5
	No research or reports	= 0

List of reports, publications, research studies etc. scored above:

Long term monitoring program present within this wetland, to meet the requirements of MECP authorization required by the previous owner.

Research and Studies Score
(maximum 12 points) 12

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT

Name of Settlement: Stitsville (Ottawa)

Distance of wetland from settlement: 3.12km

Population of settlement: 48,990 (Source: City of Ottawa)

Circle only the highest score applicable

Distance of wetland to settlement	population >10,000	population 2,500-10,000	population <2,500 or cottage community
	within or adjoining settlement 40 points	26 points	16 points
	0.5 to 10 km from settlement 26	16	10
	10 to 60 km from settlement 12	8	4
	>60 km from nearest settlement 5	2	0

Proximity to Human Settlement Score
(maximum 40 points) 26

2.6 OWNERSHIP

FA of wetland held by or held under a legal contract by a conservation body (as defined by the <i>Conservation Land Act</i>) for wetland protection	_____ x 10 = _____
FA of wetland occurring in provincially or nationally protected areas (e.g., parks and conservation reserves)	_____ x 10 = _____
FA of wetland area in Crown/public ownership, not as above	_____ x 8 = _____
FA of wetland area in private ownership, not as above	<u>1</u> x 4 = <u>4</u>

Source of information:

LIO, FIELD VISIT, GEOOttawa

Ownership Score (*maximum 10 points*) 4

2.7 SIZE (SOCIAL COMPONENT)

Total Size of Wetland = 74.58 ha Sum of scores from Subcomponents 2.1, 2.2, and 2.5 = 67

Circle the appropriate score from the table below.

Total for Size Dependent Social Features										
	<31	31-45	46-60	61-75	76-90	91-105	106-120	121-135	136-150	>150
<2 ha	1	2	4	8	10	12	14	14	14	15
2-4	1	2	4	8	12	13	14	14	15	16
5-8	2	2	5	9	13	14	15	15	16	16
9-12	3	3	6	10	14	15	15	16	17	17
13-17	3	4	7	10	14	15	16	16	17	17
18-28	4	5	8	11	15	16	16	17	17	18
29-37	5	7	10	13	16	17	18	18	19	19
38-49	5	7	10	13	16	17	18	18	19	20
50-62	5	8	11	14	17	17	18	19	20	20
63-81	5	8	11	<u>15</u>	17	18	19	20	20	20
82-105	6	9	11	15	18	18	19	20	20	20
106-137	6	9	12	16	18	19	20	20	20	20
138-178	6	9	13	16	18	19	20	20	20	20
179-233	6	9	13	16	18	20	20	20	20	20
234-302	7	9	13	16	18	20	20	20	20	20
303-393	7	9	14	17	18	20	20	20	20	20
394-511	7	10	14	17	18	20	20	20	20	20
512-665	7	10	14	17	18	20	20	20	20	20
666-863	7	10	14	17	19	20	20	20	20	20
864-1123	8	12	15	17	19	20	20	20	20	20
1124-1460	8	12	15	17	19	20	20	20	20	20
1461-1898	8	13	15	18	19	20	20	20	20	20
1899-2467	8	14	16	18	20	20	20	20	20	20
>2467	8	14	16	18	20	20	20	20	20	20

Total Size Score (Social Component) 15

2.8 ABORIGINAL VALUES AND CULTURAL HERITAGE

Either or both Aboriginal or Cultural Values may be scored. However, the maximum score permitted for 2.8 is 30 points.

Full documentation of sources must be attached to the data record.

2.8.1 Aboriginal Values

Significant	= 30 pts
Not Significant	= 0
Unknown	= 0

Additional Comments/Notes:

2.8.2 Cultural Heritage

Significant	= 30 pts
Not Significant	= 0
Unknown	= 0

Additional Comments/Notes:

Aboriginal Values/Cultural Heritage Score
(maximum 30 points) 0

3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION

Check one of the following options.

☐

If wetland is a coastal wetland, $\Rightarrow$ score 0 points for this section.

☐

If wetland is entirely isolated in site type, $\Rightarrow$ score 100 points automatically.

☒

Wetland not as above – proceed through 'steps' A through F below.

(A) Total wetland area = 74.58 ha

(B) Size of wetland's catchment = 747.81 ha

(C) Size of other detention areas in catchment = 16.27 ha

(D) Total area of upstream detention areas = {A + C} = 90.85 ha

(E) Upstream Detention Factor = {(A/D) x 2} = 1 (maximum 1.0)

(F) Attenuation Factor = {(A/B) x 10} = 1 (maximum 1.0)

Flood Attenuation Final Score = {(E + F) / 2} x 100 = _____

Flood Attenuation Score (maximum 100 points) 100

3.2 WATER QUALITY IMPROVEMENT

3.2.1 Short Term Water Quality Improvement

Step 1: Determination of maximum initial score

☐	Wetland on one of the 5 defined large lakes or 5 major rivers (Go to Step 5A)
☒	All other wetlands (Go through Steps 2, 3, 4, and 5B)

Step 2: Determination of Watershed Improvement Factor (WIF)

Calculation of WIF is based on the fractional area (FA) of each site type that makes up the total area of the wetland.

(FA = area of site type/total area of wetland)

FA of isolated wetland	=	x 0.5 =	
FA of riverine wetland	=	x 1.0 =	
FA of palustrine wetland with no inflow	=	x 0.7 =	
FA of palustrine wetland with inflows	=	1 x 1.0 =	1
FA of lacustrine on lake shoreline	=	x 0.2 =	
FA of lacustrine at lake inflow or outflow	=	x 1.0 =	

Sum (WIF cannot exceed 1.0) 1

Step 3: Determination of Catchment Land Use Factor (LUF)

(Choose the first category that fits upstream land use in the catchment.)

☐	Over 50% agricultural and/or urban	=	1.0
☐	Between 30 and 50% agricultural and/or urban	=	0.8
☒	Over 50% forested or other natural vegetation	=	0.6

LUF (maximum 1.0) 0.6

Step 4: Determination of Pollutant Uptake Factor (PUF)

Calculation of PUF is based on the fractional area (FA) of each vegetation type that makes up the total area of the wetland. Base assessment on the dominant vegetation form for each community except where dead trees or shrubs dominate. In that case base assessment on the dominant live vegetation type.

(FA = area of vegetation type/total area of wetland)

FA of wetland with live trees, shrubs, herbs or mosses (c, h, ts, ls, gc, m)	= x 0.75 =	0.75
FA of wetland with emergent, submergent or floating vegetation (re, be, ne, su, f, ff)	= x 1.0 =	
FA of wetland with little or no vegetation (u)	= x 0.5 =	

Sum (PUF cannot exceed 1.0) 0.75

Step 5: Calculation of final score

☐	Wetland on defined 5 major lakes or 5 major rivers	0
☒	All other wetlands – calculate as follows	
	Initial score	60
	Watershed Improvement Factor (WIF)	<u>1</u>
	Land Use Factor (LUF)	<u>0.6</u>
	Pollutant Uptake Factor (PUF)	<u>0.75</u>
	Final score: $60 \times \text{WIF} \times \text{LUF} \times \text{PUF} =$	<u>27</u>

Short Term Water Quality Improvement Score
(maximum 60 points) 27

3.2.2 Long Term Nutrient Trap

Step 1:

☐	Wetland on defined 5 major lakes or 5 major rivers = 0 points
☒	All other wetlands (Proceed to Step 2)

Step 2: Choose only one of the following settings that best describes the wetland being evaluated

☐	Wetland located in a river mouth	= 10 pts
☐	Wetland is a bog, fen, or swamp with more than 50% of the wetland being covered with organic soil	= 10
☒	Wetland is a bog, fen, or swamp with less than 50% of the wetland being covered with organic soil	= 3
☐	Wetland is a marsh with more than 50% of the wetland covered with organic soil	= 3
☐	None of the above	= 0

Long Term Nutrient Trap Score
(maximum 10 points) 3

3.2.3 Groundwater Discharge

Circle the characteristics that best describe the wetland being evaluated and then sum the scores. If the sum exceeds 30 points, assign the maximum score of 30). Note: for wetland type, wetland type scored does not have to be the dominant type in the wetland.

Wetland Characteristics	Potential for Discharge		
	None to Little	Some	High
	Wetland type Bog = 0	Swamp/Marsh = 2	Fen = 5
	Topography Flat/rolling = 0	Hilly = 2	Steep = 5
	Wetland area: Large (>50%) = 0	Moderate (5-50%) = 2	Small (<5%) = 5
	Upslope catchment area Lagg development None found = 0	Minor = 2	Extensive = 5
	Seeps None = 0	≤ 3 seeps = 2	> 3 seeps = 5
	Surface marl deposits None = 0	≤ 3 sites = 2	> 3 sites = 5
	Iron precipitates None = 0	≤ 3 sites = 2	> 3 sites = 5
	Located within 1 km of a major aquifer N/A = 0	N/A = 0	Yes = 10 No = 0

Additional Comments/Notes:

Groundwater Discharge Score

(maximum 30 points) 6

3.3 CARBON SINK

Check only one of the following:

	Bog, fen or swamp with more than 50% coverage by organic soil	= 5 pts
✓	Bog, fen or swamp with between 10 to 50% coverage by organic soil	= 2
	Marsh with more than 50% coverage by organic soil	= 3
	Wetlands not in one of the above categories	= 0

Source of information:

LIO, Agricultural Information Atlas, Field Visit

Carbon Sink Score

(maximum 5 points) 2

3.4 SHORELINE EROSION

CONTROL

From the wetland vegetation map determine the dominant vegetatino type within the erosion zone for lacustrine and riverine site type areas only. Score according to the factors listed below.

Step 1:

✓	Wetland entirely isolated or palustrine	= 0 pts
	Any part of the wetland is riverine or lacustrine	= Go to step 2

Step 2: Choose the one characteristic that best describes the shoreline vegetation (see page 109 for description of "shoreline".)

	Trees and shrubs	= 15 pts
	Emergent vegetation	= 8
	Submergent vegetation	= 6
	Other shoreline vegetation	= 3
	No vegetation	= 0

Shoreline Erosion Control Score

(maximum 15 points) 0

3.5 GROUNDWATER RECHARGE

3.5.1 Site Type

Wetland > 50% lacustrine (by area) or located on one of the five major rivers	=	0 pts
Wetland not as above. Calculate final score as follows:		
■ FA of isolated or palustrine wetland	=	x 50 = 50
■ FA of riverine wetland	=	x 20 =
■ FA of lacustrine wetland (not dominant site type)	=	x 0 =

Groundwater Recharge/Wetland Site Type Score
(maximum 50 points) 50

3.5.2 Soil Recharge Potential

Circle only one choice that **best** describes the soils in **the area surrounding the wetland** being evaluated (the soils within the wetland are not scored here).

Dominant Wetland Type	Group A, B, C (sands, gravels, loams)	Group D (clays, substrates in high water tables, shallow substrates over impervious materials such as bedrock)
	Lacustrine or major river	0
	Isolated	5
	Palustrine	4
	Riverine (not on a major river)	2

Groundwater Recharge/Wetland Soil Recharge
Potential Score (maximum 10 points) 7

4.0 SPECIAL FEATURES

COMPONENT

4.1 RARITY

4.1.1 Wetland Types

Ecodistrict	Rarity within the Landscape (4.1.1.1)	Rarity of Wetland Type (4.1.1.2)			
		Marsh	Swamp	Fen	Bog
6E-1	60	40	0	80	80
6E -2	60	40	0	80	80
6E-4	60	40	0	80	80
6E-5	20	40	0	80	80
6E-6	40	20	0	80	80
6E-7	60	10	0	80	80
6E-8	20	20	0	80	80
6E-9	0	20	0	80	80
6E-10	20	0	20	80	80
6E-11	0	30	0	80	80
6E-12	0	30	0	60	80
6E-13	60	10	0	80	80
6E-14	40	20	0	40	80
6E-15	40	0	0	80	80
6E-16	60	20	0	80	60
6E-17	40	10	0	30	80
7E-1	60	0	60	80	80
7E-2	60	0	0	80	80
7E-3	60	00	0	80	80
7E-4	80	0	0	80	80
7E-5	60	20	0	80	80
7E-6	80	30	0	80	80

4.1.1.1 Rarity within the Landscape

Choose appropriate score from 2nd column above.

Score (maximum 80 points) 0

4.1.1.2 Rarity of Wetland Type

Score is cumulative, based on presence/absence. Circle all appropriate scores from above table and sum.

Score (maximum 80 points) 0

4.1.2 Species

4.1.2.1 Provincially Significant Animal Species

Common Name	Scientific Name	Activity	Dates Observed	Info Source
Eastern Wood-pewee	Contopus virens	N/A	N/A	OBBA
Golden-winged Warbler	Vermivora chrysoptera	N/A	N/A	NHIC/OBBA
Wood Thrush	Hylocichla mustelina	N/A	N/A	NHIC/OBBA
Eastern Whip-poor-will	Antrostomus vociferus	N/A	N/A	NHIC/OBBA

Additional Notes/Comments:

Provincially Significant Turtles where found to not be present within the wetland information was present in MECP permit monitoring reports provided by J.F. Sabourin and Associates Inc.

One species = 50 pts	9 species = 140 pts	17 species = 160 pts
2 species = 80	10 species = 143	18 species = 162
3 species = 95	11 species = 146	19 species = 164
4 species = 105	12 species = 149	20 species = 166
5 species = 115	13 species = 152	21 species = 168
6 species = 125	14 species = 154	22 species = 170
7 species = 130	15 species = 156	23 species = 172
8 species = 135	16 species = 158	24 species = 174
		25 species = 176

Add one point for every species past 25 (for example, 26 species = 177 points, 27 species = 178 points etc.)

Provincially Significant Animal Species
(no maximum) 105

4.1.2.2 Provincially Significant Plant Species

Common Name	Scientific Name	Activity	Dates Observed	Info Source
None Found				

Additional Notes/Comments:

Provincially Significant Turtles where found to not be present within the wetland information was present in MECP permit monitoring reports provided by J.F. Sabourin and Associates Inc.

One species = 50 pts	9 species = 140 pts	17 species = 160 pts
2 species = 80	10 species = 143	18 species = 162
3 species = 95	11 species = 146	19 species = 164
4 species = 105	12 species = 149	20 species = 166
5 species = 115	13 species = 152	21 species = 168
6 species = 125	14 species = 154	22 species = 170
7 species = 130	15 species = 156	23 species = 172
8 species = 135	16 species = 158	24 species = 174
		25 species = 176

Add one point for every species past 25 (for example, 26 species = 177 points, 27 species = 178 points etc.)

Provincially Significant Plant Species

(no maximum) ⁰ _____

4.1.2.3 Regionally Significant Species

Common Name	Scientific Name	Activity	Dates Observed	Info Source
None Found				

One species= 20 pts	4 species = 45 pts	7 species = 58 pts
2 species = 30	5 species = 50	8 species = 61
3 species = 40	6 species = 55	9 species = 64
		10 species = 67

For each significant species over 10 in wetland, add 1 point.

Regionally Significant Species Score
(no maximum score) 0 _____

4.1.2.4 Locally Significant Species

Common Name	Scientific Name	Activity	Dates Observed	Info Source
None Found				

One species= 10 pts	4 species = 31 pts	7 species = 43 pts
2 species = 17	5 species = 38	8 species = 45
3 species = 24	6 species = 41	9 species = 47
		10 species = 49

For each significant species over 10 in wetland, add 1 point.

Locally Significant Species Score
(no maximum score) 0 _____

4.2 SIGNIFICANT FEATURES AND HABITATS

4.2.1 Colonial Waterbirds

Record all available information. Score the highest applicable category. Include additional information as possible (e.g., nest locations, etc).

Activity	Species	Info Source	Points
Currently nesting			= 50
Known to have nested within the past 5 years			= 25
Active feeding area (great blue heron excluded)			= 15
None known		LIO, NHIC, FIELD VISITS	= 0

Additional Notes/Comments:

Colonial Waterbird Nesting Score
(maximum 50 points) 0

4.2.2 Winter Cover for Wildlife

Score highest appropriate category. Include rationale/sources of information.

	Provincially significant	= 100 pts
	Significant in Ecoregion	= 50
	Significant in Ecodistrict	= 25
	Locally significant	= 10
✓	Little or poor winter cover	= 0

Species/habitat/vegetation community scored (e.g., winter deer cover in hemlock swamp, S3 and S4b):

Source of information:
Field Observation

Winter Cover for Wildlife Score
(maximum 100 points) 0

4.2.3 Waterfowl Staging and/or Moulting Areas

Check highest level of significance for both staging and moulting; add scores for staging and for moulting together for final score. However, maximum score for evaluation under this section is 150 points.

	Staging	Moulting
Nationally/internationally significant	= 150 pts	= 150 pts
Provincially significant	= 100	= 100
Significant in the Ecoregion	= 50	= 50
Significant in Ecodistrict	= 25	= 25
Known to occur	= 10	= 10
Not possible/Unknown	= 0	= 0

Species/habitat/vegetation community scored (e.g., approx 20 mallards in W3):

Source of information:
Field Visit

Waterfowl Staging/Moulting Score
(maximum 150 points) 0

4.2.4 Waterfowl Breeding

Check highest level of significance.

	Nationally/internationally significant	= 150 pts
	Provincially significant	= 100
	Significant in the Ecoregion	= 50
	Significant in Ecodistrict	= 25
✓	Habitat Suitable	= 10
	Habitat not suitable	= 0

Species/habitat/vegetation community scored (e.g., mallard in W3):
Ducks and Geese Possible in S4

Source of information:
Field Observation

Waterfowl Breeding Score
(maximum 150 points) 10

4.2.5 Migratory Passerine, Shorebird or Raptor Stopover Area

Check highest level of significance.

	Nationally / internationally significant	= 150 pts
	Provincially significant	= 100
	Significant in Ecoregion	= 50
	Significant in Ecodistrict	= 25
	Known to occur	= 10
✓	Not possible / Unknown	= 0

Species/habitat/vegetation community scored:

Source of information:

Field Observation: Significant Wildlife Habitat
Ecoregion Criteria Schedule for: Shorebird Migratory
Stopover Areas and Landbird Migratory Stopover Areas

Passerine, Shorebird or Raptor Stopover Score
(maximum 100 points) 0

4.2.6 Fish Habitat

4.2.6.1 Spawning and Nursery Habitat

Area Factors for Low Marsh, High Marsh and Swamp Communities.

No. of ha of Fish Habitat	Area Factor
< 0.5 ha	0.1
0.5 – 4.9	0.2
5.0 – 9.9	0.4
10.0 – 14.9	0.6
15.0 – 19.9	0.8
20.0 +	1.0

Step 1:

☐
☒

Fish habitat is not present within the wetland

Go to Step 7, Score 0 points

Fish habitat is present within the wetland

Go to Step 2

Step 2: Choose only one option

☐

Significance of the spawning and nursery habitat within the wetland is known

Go to Step 3

☒

Significance of the spawning and nursery habitat within the wetland is not known

Go through Steps 4, 5 and 6

Step 3: Select the highest appropriate category below, attach documentation:

Significant in Ecoregion

Go to Step 7, Score 100 points

Significant in Ecodistrict

Go to Step 7, Score 50 points

Locally Significant Habitat (5.0+ ha)

Go to Step 7, Score 25 points

Locally Significant Habitat (<5.0 ha)

Go to Step 7, Score 15 points

Source of information:

Step 4: Low Marsh = the 'permanent' marsh area, from the existing water line out to the outer boundary of the wetland.

☒
☐

Low marsh not present

Go to Step 5

Low marsh present

Continue through Step 4, scoring as noted below

Scoring of Low Marsh:

1. Check the appropriate **Vegetation Group** (see Appendix 7) for each Low Marsh community. (Based on the one most clearly dominant plant species of the dominant form in each Low Marsh vegetation community.)
2. Sum the areas (ha) of the vegetation communities assigned to each **Vegetation Group**.
3. Use these areas to assign an **Area Factor** (from Table 7) for each checked **Vegetation Group**.
4. Multiply the **Area Factor** by the **Multiplication Factor** for each row to calculate **Score**.
5. Sum all numbers in Score column to get **Total Score for Low Marsh**.

Scoring for Presence of Key Vegetation Groups – Low Marsh

Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (from Table 7)	Multiplication Factor	Score
1	Tallgrass				6	
2	Shortgrass-Sedge				11	
3	Cattail-Bulrush-Burreed				5	
4	Arrowhead-Pickerelweed				5	
5	Duckweed				2	
6	Smartweed-Waterwillow				6	
7	Waterlily-Lotus				11	
8	Waterweed-Watercress				9	
9	NOTE: This Evaluation Data and Scoring Ribbongrass				10	
10	Coontail-Naiad-Watermilfoil				13	
11	Narrowleaf Pondweed				5	
12	Broadleaf Pondweed				8	
Total Score for Low Marsh (maximum 75 points)						

Continue to Step 5

Step 5: High Marsh = the 'seasonal' marsh area, from the water line to the inland boundary of marsh wetland type. This is essentially what is commonly referred to as a wet meadow, in that there is insufficient standing water to provide fisheries habitat except during flood or high water conditions.

☒
☐

High marsh not present

Go to Step 6

High marsh present

Continue through Step 5, scoring as noted below

Scoring of High Marsh:

1. Check the appropriate **Vegetation Group** (see Appendix 7) for each High Marsh community. (Based on the one most clearly dominant plant species of the dominant form in each High Marsh vegetation community.)
2. Sum the areas (ha) of the vegetation communities assigned to each **Vegetation Group**.
3. Use these areas to assign an **Area Factor** (from Table 7) for each checked **Vegetation Group**.
4. Multiply the **Area Factor** by the **Multiplication Factor** for each row to calculate **Score**.
5. Sum all numbers in Score column to get **Total Score for High Marsh**.

Scoring for Presence of Key Vegetation Groups – High Marsh

Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (from Table 7)	Multiplication Factor	Score
1	Tallgrass				6	
2	Shortgrass-Sedge				11	
3	Cattail-Bulrush-Burreed				5	
4	Arrowhead-Pickerelweed				5	
Total Score for High Marsh (<i>maximum 25 points</i>)						

Continue to Step 6

Step 6:

☐	Swamp containing fish habitat not present	Go to Step 7
☒	Swamp containing fish habitat present	Continue through Step 6, scoring as follows

Scoring of Swamp:

1. Determine the total area (ha) of seasonally flooded swamp communities within the wetland containing fish habitat and record below.
2. Determine the total area (ha) of permanently flooded swamp communities within the wetland containing fish habitat and record below.
3. Use these areas to assign an **Area Factor** (from Table 7).
4. Multiply the Area Factor by the **Multiplication Factor** for each row to calculate **Score**.
5. Sum all numbers in Score column to get **Total Score for Swamp**.

Scoring Swamps for Fish Habitat (Seasonally flooded; Permanently flooded)					
Swamp Containing Fish Habitat	Present (check)	Total Area (ha)	Area Factor (from Table 7)	Multiplication Factor	Score
Seasonally Flooded Swamp				10	
Permanently Flooded Swamp	✓	1.76	0.2	10	0.352
Total Score for Swamp (maximum 20 points)					1
Continue to Step 7					

Step 7: CALCULATION OF FINAL SCORE

NOTE: Scores for Steps 4, 5 and 6 are only recorded if Steps 1 and 3 have not been scored.

- A. Score from Step 1 (fish habitat not present) = X
- B. Score from Step 3 (significance known) = X
- C. Score from Step 4 (Low Marsh) = X
- D. Score from Step 5 (High Marsh) = X
- E. Score from Step 6 (Swamp) = 1

Calculation of Final Score for Spawning and Nursery Habitat = A or B or Sum of C, D, and E

Score for Spawning and Nursery Habitat
(maximum 100 points) 1

4.2.6.2 Migration and Staging Habitat

Step 1:

☐	Staging or Migration Habitat is not present in the wetland	Go to Step 4, Score 0 points
☐	Staging or Migration Habitat is present in the wetland, significance of the habitat is known	Go to Step 2
☒	Staging or Migration Habitat is present in the wetland, significance of the habitat is not known	Go to Step 3

Step 2: Select the highest appropriate category below. Ensure that documentation is attached to the data record.

☐	Significant in Ecoregion	Score 25 points in Step 4
☐	Significant in Ecodistrict	Score 15 points in Step 4
☐	Locally Significant	Score 10 points in Step 4
☐	Fish staging and/or migration habitat present, but not as above	Score 5 points in Step 4

Source of information:

Step 3: Select the highest appropriate category below based on presence of the designated site type (i.e. does not have to be the dominant site type). Refer to Site Types recorded earlier (section 1.1.3). Attach documentation.

☐	Wetland is riverine at rivermouth or lacustrine at rivermouth	Score 25 points in Step 4
☐	Wetland is riverine, within 0.75 km of rivermouth	Score 15 points in Step 4
☐	Wetland is lacustrine, within 0.75 km of rivermouth	Score 10 points in Step 4
☒	Fish staging and/or migration habitat present, but not as above	Score 5 points in Step 4

Step 4: Enter a score from only one of the three above Steps.

Score for Staging and Migration Habitat (maximum 25 points) <u>5</u>

4.3 ECOSYSTEM AGE

		Fractional Area		Score
Bog	=		x 25 =	
Fen, on deeper soils; floating mats or marl	=		x 20 =	
Fen, on limestone rock	=		x 5 =	
Swamp	=	1	x 3 =	3
Marsh	=		x 0 =	
Total			=	

Ecosystem Age Score (*maximum 25 points*) 3

4.4 GREAT LAKES COASTAL WETLANDS

Choose one only.

	Wetland < 10 ha	=	0
	Wetland 10-50 ha	=	25
	Wetland 51-100 ha	=	50
	Wetland > 100 ha	=	75

Great Lakes Coastal Wetland Score
(*maximum 75 points*) _____

GENERAL INFORMATION

Wetland Evaluator(s)

Name: Shaun St Pierre Affiliation: BCH Environmental Consulting Inc.

Signature: 

(by signing, I confirm that this evaluation has been undertaken and completed in accordance with the Ontario Wetland Evaluation System Southern Manual 4th Edition / Northern Manual 2nd Edition)

Name: _____ Affiliation: _____

Signature: _____

(by signing, I confirm that this evaluation has been undertaken and completed in accordance with the Ontario Wetland Evaluation System Southern Manual 4th Edition / Northern Manual 2nd Edition)

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Signature: _____

(by signing, I confirm that this evaluation has been undertaken and completed in accordance with the Ontario Wetland Evaluation System Southern Manual 4th Edition / Northern Manual 2nd Edition)

Date(s) wetland visited (in field): See Table Below

Date evaluation completed: March 22, 2024

Estimated time devoted to completing the field survey in person hours: 11

Weather Conditions

i) at time of field work: See Table Below

ii) summer conditions in general: N/A

DATE	TIME	AIR TEMP. (°C)	WIND (Beaufort Scale)	CLOUD COVER / PRECIPITATION	STAFF
October 20, 2023	0945h-1230h	14	Light Air	Overcast	S.St.Pierre <u>C.Fontaine</u>
March 18, 2024	0800h-1330h	-4	Light Air	Clear Skies	<u>C.Fontaine</u>

NOTE: This Wetland Evaluation Data and Scoring Record should be viewed with the accompanied report which adds additional information and context to some of the decision making:

BCH Environmental Consulting (2024). Wetland Evaluation: 7301 Flewellyn Road, Ottawa.
Part of Lot 14 & 15, Concession 9, City of Ottawa.

WETLAND EVALUATION SCORING

RECORD

WETLAND NAME: Portions of the Goulbourn Wetland Complex

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

19 1.1.1 Growing Degree-Days/Soils

8 1.1.2 Wetland Type

2 1.1.3 Site Type

29

1.2 BIODIVERSITY

9 1.2.1 Number of Wetland Types

8 1.2.2 Vegetation Communities

4 1.2.3 Diversity of Surrounding Habitat

12 1.2.4 Proximity to Other Wetlands

8 1.2.5 Interspersion

10 1.2.6 Open Water Type

51

10 1.3 SIZE (Biological Component)

90 TOTAL (Biological Component)

2.0 SOCIAL COMPONENT

	2.1	ECONOMICALLY VALUABLE PRODUCTS
9	2.1.1	Wood Products
0	2.1.2	Wild Rice
12	2.1.3	Commerical Baitfish
12	2.1.4	Furbearers
33		Total for Economically Valuable Products
8	2.2	RECREATIONAL ACTIVITIES
	2.3	LANDSCAPE AESTHETICS
0	2.3.1	Distinctness
4	2.3.2	Absence of Human Disturbance
4		Total for Landscape Aesthetics
	2.4	EDUCATION AND PUBLIC AWARENESS
0	2.4.1	Educational Uses
0	2.4.2	Facilities and Programs
12	2.4.3	Research and Studies
12		Total for Education and Public Awareness
26	2.5	PROXIMITY TO AREAS OF HUMAN SETTLEMENT
4	2.6	OWNERSHIP
15	2.7	SIZE (Social Component)
	2.8	ABORIGINAL VALUES AND CULTURAL HERITAGE
0	2.8.1	Aboriginal Values
0	2.8.2	Cultural Heritage
102		TOTAL (Social Component)

3.0 HYDROLOGICAL COMPONENT

100	3.1 FLOOD ATTENUATION
	3.2 WATER QUALITY IMPROVEMENT
27	3.2.1 Short Term Water Quality Improvement
3	3.2.2 Long Term Nutrient Trap
6	3.2.3 Groundwater Discharge
36	Total for Water Quality Improvement
2	3.3 CARBON SINK
0	3.4 SHORELINE EROSION CONTROL
	3.5 GROUNDWATER RECHARGE
50	3.5.1 Site Type
7	3.5.2 Soil Recharge Potential
57	Total for Groundwater Recharge
195	TOTAL (Hydrological Component)

4.0 SPECIAL FEATURES COMPONENT

	4.1 RARITY
	4.1.1 Wetlands
0	4.1.1.1 Rarity within the Landscape
0	4.1.1.2 Rarity of Wetland Type
0	Total for Wetland Rarity
	4.1.2 Species
105	4.1.2.1 Provincially Significant Animals
0	4.1.2.2 Provincially Significant Plants
0	4.1.2.3 Regionally Significant Species
0	4.1.2.4 Locally Significant Species
105	Total for Species Rarity
	4.2 SIGNIFICANT FEATURES AND HABITATS
0	4.2.1 Colonial Waterbirds
0	4.2.2 Winter Cover for Wildlife
0	4.2.3 Waterfowl Staging and/or Moulting Areas
10	4.2.4 Waterfowl Breeding
0	4.2.5 Migratory Passerine, Shorebird or Raptor Stopover Area
	4.2.6 Fish Habitat
1	4.2.6.1 Spawning and Nursery Habitat
5	4.2.6.2 Migration and Staging Habitat
16	Total for Significant Features and Habitats
3	4.3 ECOSYSTEM AGE
0	4.4 GREAT LAKES COASTAL WETLANDS
124	TOTAL FOR SPECIAL FEATURES COMPONENT <i>(not to exceed 250)</i>

SUMMARY OF EVALUATION RESULT

Wetland Portions of the Goulbourn Wetland Complex

<u>90</u>	1.0 TOTAL FOR BIOLOGICAL COMPONENT
<u>102</u>	2.0 TOTAL FOR SOCIAL COMPONENT
<u>195</u>	3.0 TOTAL FOR HYDROLOGICAL COMPONENT
<u>124</u>	4.0 TOTAL FOR SPECIAL FEATURES COMPONENT
<u>511</u>	TOTAL WETLAND SCORE